

## PATENT COOPERATION TREATY

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 03 AUG 1999

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Applicant's or agent's file reference 10359A	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FI98/00370	International filing date (day/month/year) 28.04.1998	Priority date (day/month/year) 29.04.1997
International Patent Classification (IPC) or national classification and IPC <sub>6</sub> C 12 C 11/09, C 12 H 1/00		
Applicant OY PANIMOLABORATORIO - BRYGGERILABORATORIUM AB et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 23.09.1998	Date of completion of this report 27.07.1999
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88	Authorized officer Patrick Andersson/EÖ Telephone No. 09-792 25 00

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FI98/00370

## I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

- ☒ the international application as originally filed.
- ☐ the description, pages \_\_\_\_\_, as originally filed,  
 pages \_\_\_\_\_, filed with the demand,  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☐ the claims, Nos. \_\_\_\_\_, as originally filed,  
 Nos. \_\_\_\_\_, as amended under Article 19,  
 Nos. \_\_\_\_\_, filed with the demand,  
 Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☐ the drawings, sheets/fig \_\_\_\_\_, as originally filed,  
 sheets/fig \_\_\_\_\_, filed with the demand  
 sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FI98/00370

## V. Resoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	<u>1-14</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-14</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-14</u>	YES
	Claims		NO

### 2. Citations and explanations

The wording "similar particles" of claims 1 and 13 is considered to be unclear since neither the claims nor the description disclose what properties should be similar nor, consequently, what particles are included in this wording. Therefore, this examination report concerns only carrier material consisting of wooden particles.

The present application relates to a continuous method for maturation of beer after main fermentation and a reactor adapted for the method. In the method unmaturred beer following main fermentation, removal of yeast and heat treatment, is passed into a bio-reactor filled with yeast immobilised on wooden particles.

The following document are considered relevant:

D1: US4915959

D2: Dialog Information Services, BIOSIS, Dialog accession no. 3369982, Biosis accession no. 72002373, Moo-Young M et al: "Immobilization of yeast cells on various supports for ethanol production"; Biotechnol Lett "(12). 1980 (RECD. 1981)p541-548

D1 shows the use of immobilised yeast for second fermentation of unmaturred beer after main fermentation, removal of yeast and heat treatment. In this method the yeast is immobilised on alginate or preferably on DEAE cellulose.

D2 shows the use of yeast immobilised on birch for ethanol production.

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FI98/00370

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

Neither of the documents suggests the use of wooden particles for immobilisation of yeast for maturation of beer after main fermentation. Consequently, the cited documents disclose the general state of the art, which is considered to be of particular relevance. Thus, the invention according to claims 1-14 fulfils the requirements of novelty, inventive step and industrial applicability.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FI98/00370

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The wording "similar particles" of claims 1 and 13 is considered to be unclear since neither the claims nor the description disclose what properties should be similar nor, consequently, what particles are included in this wording.

## PATENT COOPERATION TREATY

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## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

United States Patent and Trademark  
Office  
(Box PCT)  
Crystal Plaza 2  
Washington, DC 20231  
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing: 05 November 1998 (05.11.98)	
International application No.: PCT/FI98/00370	Applicant's or agent's file reference: 10359A
International filing date: 28 April 1998 (28.04.98)	Priority date: 29 April 1997 (29.04.97)
Applicant: LINKO, Matti et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International preliminary Examining Authority on:

23 September 1998 (23.09.98)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer:  J. Zahra Telephone No.: (41-22) 338.83.38
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